Town of Branford Information Technology Strategic Plan

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Strategic Directions and Initiatives

1. STATEMENT OF DIRECTION

Keeping up with the pace of change in technology and using technology effectively to meet end-user requirements and expectations are the most critical challenges facing information technology providers. Advances in technology can enable the workforce to provide better and faster services at a reduced cost, but changes in technology can be expensive and complex. New technology must be adapted carefully and integrated wisely into the existing technology infrastructure in order to maximize the benefits in a cost effective manner. Departments and/or the public are the recognized "stake holders" in most all technology implementations. It is key to the success of any technology based project that these stake holders be involved from inception of the idea through implementation.

The following initiatives address Branford's objective to provide effective, efficient and customer-oriented access to data and services for constituents and for internal government customers on an enterprise scale.

2. CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

The expectations of government services continue to change dramatically. Citizens want to interact with government through the channels that best suit their needs. Branford continues to enhance the services with CRM, technology applications. The online recreation system (RecTrak) has over 70% of activity registrations now being done over the internet. Lines at the assessor's office to get a property card printed or information on a recent sale are a thing of the past as through the Town's web site this information is readily available, along with a copy of the deed! Recently we implemented an all new tax and utility billing system with on line payment processing. We will be using the utility billing system for the pending sewer use billing scheduled for August 2007. The utility billing system was initially acquired for billing sewer and water assessments. However, it will now also be used for the sewer use billing. Were it not for the on line payment processing capability of this system, taking on additional work with existing staff to process the additional 10,000+ bills, would not have been possible.

A major component of CRM is the availability of the systems for constituent and employee use. Recent advances in technology have made "redundancy" for the sake of business continuity affordable and therefore a goal of this department. Redundancy at the Town Hall based servers means that with a server failure all local and remote users (except PD/FD and BOE) will no longer experience "downtime" while the failed unit is repaired/replaced. Were it not for redundancy these same users (constituents and employees) would be unable to conduct business requiring computer access for 1-2 days.

In the event of a building loss to a true disaster such as a fire or hurricane, the "down time to recovery" could be as much as two (2) weeks. With redundancy this period would be shortened to literally hours. Presently we remotely store on the police department's

Network Attached Storage (NAS) unit all Town Hall based data on a daily basis. The police department stores their data here with the same frequency. In both cases the data is encrypted for security reasons. However, a disaster that made either building unusable, would presently require;

- Ordering replacement hardware and operating system software (the AS/400 replacement would take several days in case of any failure)
- Physically setting up the equipment at a remote site (present plans call for going to each other's location)
- Installing the applications for the Microsoft and AS/400 based applications (presently processes only the finance application. The AS/400 will hopefully be migrated to the Microsoft based servers no later than 7-1-08)
- Importing the data that was stored "off site"
- Testing the system
- Turning it over to the users

We have documentation that will make this possible. However the process will take up to the aforementioned two weeks. Implementing a VMWare based approach will place VMWare servers at both the Town Hall and Police department. VMWare technology treats all applications as a "file". Restoring a "file" as opposed to an operating system or application on a VMWare based server requires only a few hours. We hope to gain approval for budget for fiscal '08 to address the Town Hall at a minimum. This will insure against the most probable event of a server failure for all Town Hall server users. It will not address the same for the police or fire departments, nor will it shorten the recovery for a Town Hall building loss. We will look to address this short coming in the '09 fiscal year.

Another area we will continue to look at and act as appropriate for increased CRM is the replacing of personal computers with thin client type devices that rely on the servers for functionality. The servers are where the applications presently reside except for the PC based Microsoft applications (Word, Excel, etc.). By shifting the serving up of these applications back to the server we accomplish;

- Fewer licenses for both operating systems and Microsoft applications due to;
    - thin clients not requiring licensing for either the operating system of applications
    - servers only requiring a single operating system license as opposed to the one on one for a personal computer
    - Microsoft application licensing that is server based is "usage based" (we presently buy MS Office Professional for all installed PC's---never are all applications used by all users at the same time---by going to usage based we should see a 50% drop in Microsoft application licensing fees at a minimum)
- Centralizing back to the Town Hall based servers will position us to better support the end user as our availability will be greater due to no longer having to "travel" to the desktop
- PC's because of moving parts typically have a life expectancy of 3-5 years. Thin client PC's have no moving parts and should last a minimum of 8-12 years.

- Our standard configuration for a personal computer with Microsoft Office Professional costs around $1,000. A thin client with a Citrix additional license cost around $600.

The bottom line on CRM for our department is that "we will aggressively investigate and, where appropriate, implement technology to better serve constituents and employees". We are continuously looking to improve processes through appropriate and cost justified application of technology.

3. e-GOVERNMENT

The e-Government initiatives use enabling technology for Branford to provide 24 hour operation. The Branford web site www.branford-ct.gov provides a "government without walls, doors or clocks". In addition to the on-going efforts to enhance the look, feel and navigation of the web interface and deploying new services and transactions, Branford has achieved much success and acclaim for its e-Government focus. In fiscal '08 Branford will continue to add new services in the areas of; sewer use/sewer assessment/water assessment on-line payment processing, on-line simple permit application/approval, P&Z application status, Beach/Park access and dog licensing.

Major fiscal '07 accomplishments include; the automatic email notification system for those constituents who have "opted in" to notices, agendas and/or minutes for the various Boards/Commissions, processing of tax payments on-line, deed access, home sales by category, maps of many Branford trails for hiking, Town bid/proposals and a Google search capability for all Town information.

Information and Services available from the Town's web site www.branford-ct.gov include;

- Annual Report
- Board/Commission meeting agendas/minutes/notices/members with contact information
- Budget Information and approved Budget
- Collection of household trash and recyclable schedules
- Department pages for all departments with contact and hours of operation
- Public meeting calendar
- Employment Opportunities
- Forms
- Town Charter
- Parks/Recreation information
- Pay taxes with a credit card/check
- Police, Fire & Rescue information
- Property Cards
- Recreation department event/activity on-line scheduling with a credit card
- School District map for elementary schools
- Senior's information
- Walking Trail maps

4. DOCUMENT MANAGEMENT SCANNING/FILMING/INDEXING

Branford is strategically approaching content and document management from an integrated, enterprise approach. Content management becomes the foundation for organizing and using information from structured data (through business applications), and unstructured data in electronic or imaged documents (word processing documents, spreadsheets, e-mail and reports). The Town has embraced a technology (FORTIS) that was developed by a Branford based business, Westbrook Technologies, for the electronic storage and easy retrieval of this type of information. The rich document management capability provided by FORTIS allows more efficient management flow and storage of vast amounts data that here to fore was all paper based. By conforming to Connecticut record retention requirements **(Connecticut State Library Municipal Records Retention Schedule M-1)** and using FORTIS technology we have implemented processes and procedures which, when fully implemented, will significantly reduce the volume of stored paper. At the same time the security of the documents will have been assured through off site film and data storage. This enterprise document management initiative with incorporated workflow solutions will improve business process efficiency and productivity while meeting the needs to view hard copy records. In addition to fast and reliable business processes, this will minimize the demand for additional paper records' storage space, protect against mounting storage costs, and reduce human and physical plant asset risks associated with handling of the voluminous units of paper.

In addition to continued work described above, the following have been accomplished in the area of electronic storage;

- All Information Technology processes have been documented and electronically stored
- All welfare paper records have been replaced with electronically indexed images
- Over 4,000 commercial drawings have been filmed and replaced with indexed images
- Over 50,000 vital records are in the process of being scanned and electronically indexed. When done the time to produce a birth certificate will drop from over 10 minutes to less than 2 minutes.
- All contractors with their insurance and certificate information has been electronically stored
- Improved access and security through utilization of the 9 levels of security associated with our electronic indexing system
- Improved disaster recovery as here to for much of the paper existed as a single paper copy only.
    - With budget approval for fiscal '08 ($35,000) we will be electronically storing the contents of 17 5-drawer filing cabinets in the Building/P&Z area. This will free up significant, needed floor space and at the same time make the access to stored information much more efficient
    - The Town Clerk is using the "dollar fund" money that comes through copies made by the public to scan all vitals such that the process for producing a copy is reduced from 8-10 minutes to less than 1!

5. GEOGRAPHIC INFORMATION SYSTEMS (GIS)

Branford's GIS has continued its growth in the number of direct GIS users as well as indirect users, working with applications that now include GIS embedded as part of their

operation. Some of these tools have been made available to appropriate Boards/Commissions such as the Inland Wetlands, Conservation and Parks. During fiscal ’07 we converted our file based Environmental Systems Research Institute (ESRI) data to a geo-database which provides for use of the data in a planning mode. Answering “what if” questions such as; developable land by zone of certain size, response time to a point for patrol planning, school impact of a proposed development, what is the best way to redistrict, etc. are now all possible. With over 80 shape files being selectable by the user the ability to graphically depict appropriate data has proven to be a significant benefit to applicants and town employees. Overlaying property borders with such shapes as wetlands has greatly assisted the planning and approval process.

Having key town data available digitally through the GIS provides a range of benefits to constituents as well as staff. The orthoimagery is widely used within GIS as well as over the web. Because the parcel and zoning data in now maintained digitally, production of key reports and maps has been greatly accelerated. Much time consuming manual steps have been replaced with the digital production process.

The underlying GIS hardware and software architecture were significantly enhanced with the change to a geo-database, new plotting equipment and a dedicated “map server”.

The GIS database was extensively used to determine those parcels to be billed the pending sewer use fee as required by the State of Connecticut’s Department of Environment Protection (DEP) and the Clean Water Fund (CWF). We were able to plot parcels in areas where sewers existed and take the next step by matching sewer connection permits with these parcels. The final step was to use the remaining GIS data to do a mailing to those homes we had no record on file of their connecting. The mailing indicated we would be billing them unless they contested the action in which case we would test the outflow with a dye to be sure a connection had not been made they were unaware of.

Approximately 85 percent of municipal data is location related. The most common link is the map/block/lot and/or address. Because of this these keys have been indexed whenever and wherever possible such that future uses yet to be identified can be accommodated.

The federal government has required all municipalities to identify and value their asset under the GASB34 set of accounting standards. The town’s GIS was significantly updated with such items as catch basing, piping, pavement condition, curbing, bridges, etc. during this process. The Public Works department uses this data as they are cleaning out catch basins to be sure they “get them all”, thus avoiding more costly future clean outs and/or flood damage due to poor drainage.

The future for GIS is to make more and more mapping generally available to the public as the band width required to do so becomes more affordable. We expect to move toward cable and away from DSL during the upcoming fiscal year. This will hasten making maps more available on-line. Initially the maps will be static, but over time may become user selectable depending on the availability and costliness of required resources.

6. TELECOMMUNICATIONS AND DATA COMMUNICATIONS

Voice communications is a bedrock technology in today's technology architecture. As government is asked to do more with less, stretching limited financial and human resources, it relies on efficient voice communications to improve efficiencies and improve the growing needs of citizens. Whether it is citizen access via e-Government, efficient management of government information, the advancement of education, the safety of our children on school buses, or most recently, homeland security, voice and data communications play a critical role.

Integrating voice, video and data communications onto a common structure, which has been envisioned by the industry since the 1980's is now becoming a reality. This convergence will bring tremendous benefits to enterprises such as Branford that presently use disparate voice and data networks.

Many municipalities have employed a technology called "Mesh" or "Canopy" whereby the voice and data for the community is initially transmitted over the municipality's system. This has significant opportunities for cost savings/recovery, public safety, constituent use, etc. Philadelphia, for instance, sells at almost a wholesale price, internet access to their citizens to promote e-Learning. Houston uses their "mesh" to communicate in a secure environment such information as car based video, data and voice. San Francisco is projected to earn a $22.9 million benefit over the initial cost of their Wireless Fidelity (WiFi) system. Smaller communities such as Rio Ranch, NM expect to "spur growth and entice business, including the film industry, to town".

In Branford the use of this technology would make such technologies as on-line video showing the traffic on Route 1 an affordable reality. Our ComDev (building, P&Z, engineering and Inland Wetlands) field folks would be easily able to access town based information such that they could more efficiently do their jobs and at the same time provide for better service.

7. THIN CLIENT AND "DUMB TERMINAL" UTILIZATION

With the enhanced Citrix based access to the Town's servers it has become possible to utilize such devices as thin client and "server based" PC's. There are five significant advantages to continuing to utilize this technology whenever and wherever possible;

a. These devices do not require their own operating systems, nor do they require application software including such popular applications as MS Word and Excel. Therefore the cost of ownership is about ½ initially. ($1,000 versus $500). Because of the lack of moving parts these devices will not be put on maintenance. PC maintenance typically costs about $100/year.

b. Because these devices do not have any “moving parts” the end user experiences 100% up time (assumes the servers are “up”---for both a PC and thin client’s use). PC’s do break as they have moving parts (disk, CD and floppy drive).
c. Thin client and “dumb terminals” lack a disk/CD/Floppy drive and therefore cannot have a virus downloaded onto or through them. Getting a virus on the servers over the internet would be the same no matter the connection. We do take significant precautions for the servers for this reason. Anti-virus and spam actions would never be cost justified for the end user PC’s.
d. Desktop real estate is always at a premium. Thin client and dumb terminals require less than 75% of the desk space required by a PC.
e. Resetting a thin client or dumb terminal requires turning it off and then on. This typically is accomplished in less than a minute. A PC takes several minutes to “come up”.